Sediment Quality in the San Juan Islands, Eastern Strait of Juan de Fuca, and Admiralty Inlet

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Sediment quality in Puget Sound is monitored by the Department of Ecology annually as a component of the Puget Sound Ambient Monitoring Program (PSAMP). The primary objectives of this program are to quantify the spatial extent and geographic patterns of degraded sediment quality. Using the Sediment Quality Triad approach, data are evaluated on the chemical contamination and toxicity of sediments along with analyses of the composition of the resident infaunal benthos. During June of 2002 and 2003, Ecology collected 81 samples in the bays and inlets of the San Juan Islands, eastern Strait of Juan de Fuca, and Admiralty Inlet. A stratified-random method was used to identify sampling locations. Analyses included quantitation of 118 potentially toxic chemicals, a battery of four laboratory toxicity tests, and the evaluation of infaunal community structure. Results of these analyses were compiled from the two survey periods and merged to identify spatial patterns and spatial extent of degraded sediment quality in these three regions. The triad analysis suggests that the sediment quality in these three regions was comparable to that of some of the least degraded regions previously studied by this program.